

Work Order ID 71864

Wednesday, July 13, 2011 11:01:51 AM



Page 1

Item ID: D3183-045

Accept



Setup

Start



Revision ID:

Item Name: Bearing Assembly

Stop



Start Date: 7/14/2011 Start Qty: 20.00



Cust Item ID:

Required Date: 7/28/2011 Req'd Qty: 20.00



Customer:

Reference:

Approvals:

Process Plan: *MF*

Date: *11-07-13*

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3183	Rev C1

100



Hardinge CNC LATHE SMALL

Hardinge

Memo

Hardinge CNC Lathe Small

Turn D3183-9 Cap as per Folio PA388 Deburr

0.00

20

Ø

110



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

Quality Control

0.00

2A

11/8/10

20

Ø

120



QC8- Inspect parts - second check

QC

Memo

Quality Control

0.00

0.00

RE 11.8.10

20

Ø

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 71864

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Page 2

Item ID: D3183-045

Accept



Setup Start



Revision ID:

Item Name: Bearing Assembly

Stop



Start Date: 7/14/2011 Start Qty: 20.00



Cust Item ID:

Required Date: 7/28/2011 Req'd Qty: 20.00



Customer:

Reference:

Approvals: Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start



QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

Sequence ID/
Work Center ID

130

Operation
Description

Small Fab

Set Up/
Run Hours

0.00

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Small Fab

Small Fab

Memo

0.00

Press D3183-5 Bearing into D3183-9 Cap as per Dwg D3183.

140



QC

Quality Control

QC5- Inspect part completeness to step on W/O:

0.00

Memo

150



Packaging

Packaging

Identify as per dwg & Stock Location: 230

0.00

Memo

0.00

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3183-9 PAR #: N/A Fault Category: Machining NCR: Yes No DQA: A Date: 11-08-17
 Resolution: Scram Disposition: Scram QA: N/C Closed: D Date: 11-8-19

NCR: 71864		WORK ORDER NON-CONFORMANCE (NCR) 2.88						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11/08/11	#100	Found at assembly that Only #1 D3183-9 was machined too thin (so doesn't fit bearing)	100 asqurz	-SCRAP + Destry no Rebuild	100 11/08/11	100 11/08/11	100 asqurz	100 11/08/11
		2.1. Lack of attention on operator. (tools set correct , Pay load correct , w/o + Drawing are correct + FAZ sheet is Right)						

NOTE: Date & initial all entries

Work Order ID 71864

Page 3

Wednesday, July 13, 2011 11:01:51 AM

Item ID: D3183-045

Accept



Setup

Start



Revision ID:

Item Name: Bearing Assembly

Stop



Start Date: 7/14/2011 Start Qty: 20.00



Cust Item ID:

Required Date: 7/28/2011 Req'd Qty: 20.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

160



QC

Quality Control

Operation
Description

QC21- Final Inspection - Work Order Release

Set Up/
Run Hours

0.00

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

CK 11/08/12

Memo

0.00

11-08-12
18

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Page 1

Wednesday, July 13, 2011 11:01:49 AM

Work Order ID: 71864



Parent Item: D3183-045



Parent Item Name: Bearing Assembly

Start Date: 7/14/2011

Required Date: 7/28/2011

Start Qty: 20.00

Required Qty: 20.00

Comments: IPP A□04.02.18□New issue□KJ/DS□

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3183-5



Manufactured

No

110

Each

5.0000

1

20

Bearing

Location	Loc Qty	Loc Code
----------	---------	----------

ST236

5

67529

1

68933

4

MDELRRINR1.000



Purchased

No

130

f

32.4070

0.0333

0.701053

Delrin Round Bar 1"

Location	Loc Qty	Loc Code
----------	---------	----------

MAT055

32.407

117985

0.407

118237

32

SD 118J10
-16P+

W/O:		WORK ORDER CHANGES					
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD	Work Order:	71864
Description: Cap	Part Number:	D3183-9
Inspection Dwg: D3183	Rev: C1	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Article Prototype

Measured by:
Date: 1/18/10

Audited by: RQ

Prototype Approval:	N/A
Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.04.20	New Issue (P/O D3183-045)	KJ/RF	
B	06.03.09	Dimension Ø0.830 was Ø0.850	KJ/JLM	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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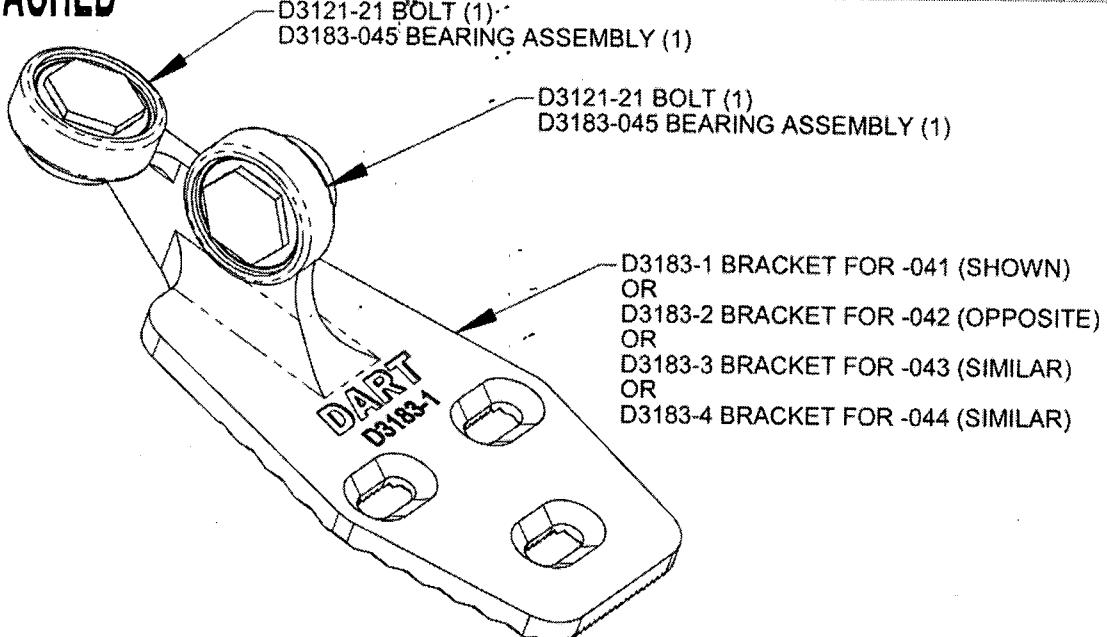
NOTE: Date & initial all entries



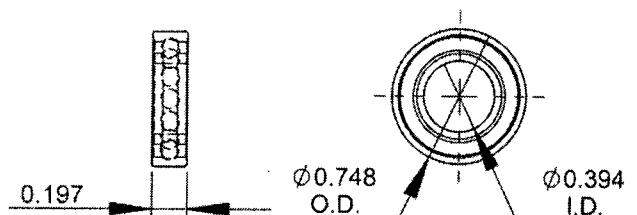
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CHECKED	APPROVED	DRAWING NO.	REV. C
		D3183	SHEET 1 OF 4
DATE	04.02.17	TITLE	SCALE 1:1

RELEASED
04.03.01
DEO ATTACHED

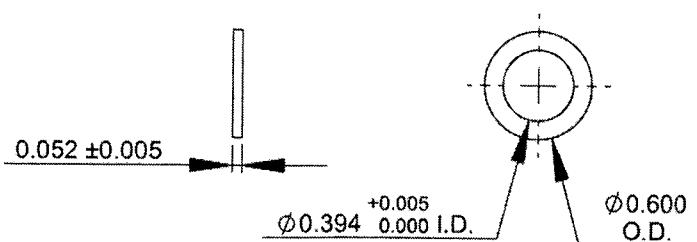


D3183-041 BRACKET ASSEMBLY (SHOWN)
D3183-042 BRACKET ASSEMBLY (OPPOSITE)
D3183-043 BRACKET ASSEMBLY (SIMILAR)
D3183-044 BRACKET ASSEMBLY (SIMILAR)



D3183-5 BEARING: SPECIFICATION CONTROL DRAWING

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED
- 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES



D3183-7 WASHER

- 1) MATERIAL: AISI 303 ROUND BAR (M303R) ANNEALED
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

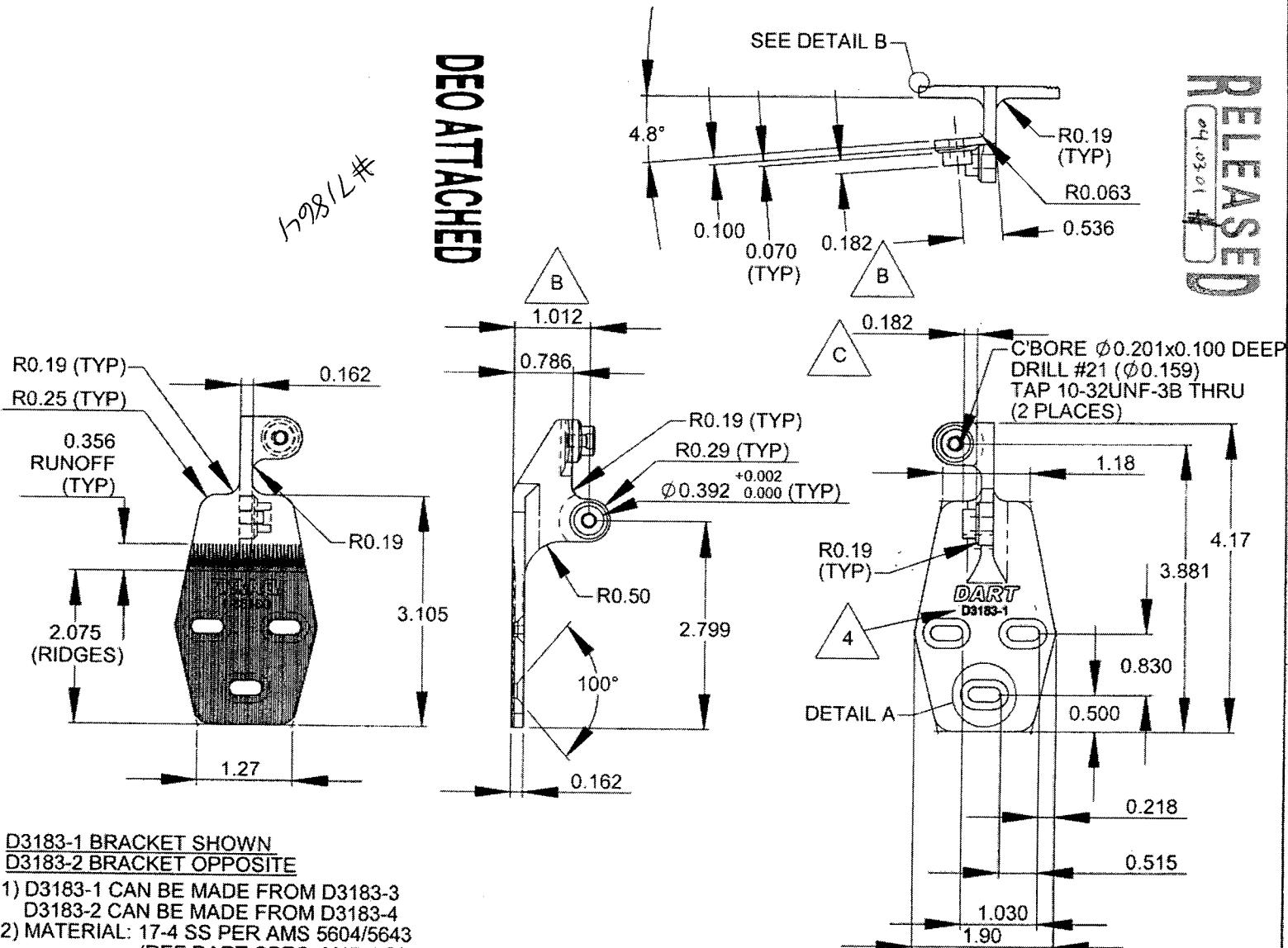
NOTE: Date & initial all entries

DART
04-02-01

ACOPY IS
D3183

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		REV. C
DATE	DRAWING NO.	SHEET 2 OF 4
04.02.17	D3183	1:2
	TITLE	SCALE
	BRACKET ASSEMBLY	

DETACHED



D3183-1 BRACKET SHOWN
D3183-2 BRACKET OPPOSITE

- 1) D3183-1 CAN BE MADE FROM D3183-3
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS
OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



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<i>[Signature]</i>	<i>[Signature]</i>	D3183	SHEET 3 OF 4
DATE	TITLE		SCALE
04.02.17	BRACKET ASSEMBLY		1:2

RELEASED
24-08-01
44

The diagram illustrates a soil infiltration model with the following dimensions and parameters:

- Top width: 0.162
- Top left elevation: R0.19 (TYP)
- Top right elevation: R0.25 (TYP)
- Left side elevation: 0.36 RUNOFF (TYP)
- Right side elevation: R0.19
- Left side ridge height: 2.08 (RIDGES)
- Right side height: 4.26
- Bottom left elevation: 1.155
- Bottom right elevation: 0.71

D3183-3 BRACKET SHOWN
(REPLACES BELL P/N 412-030-304-105)
D3183-4 BRACKET OPPOSITE

D3183-4 BRACKET OPPOSITE
(REPLACES BELL P/N 412-030-304-106)

1) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi

2) BREAK ALL SHARP EDGES 0.005 TO 0.015
3) ENGRAVE DART P/N & LOGO AS SHOWN

3) ENGRAVE DART P/N & LOGO AS SHOWN
4) TOLERANCES ARE .005-.010" (1.27-2.54mm)

4) TOLERANCES ARE PER DART QSI 018 UNLESS

4) CLEARANCES ARE PER DART QSI U18 UNLESS OTHERWISE NOTED
5) ALL DIMENSIONS ARE IN INCHES

5) ALL DIMENSIONS ARE IN INCHES

SEE DETAIL B

0.00

0.070 (TYP) 0.182

0.536

R0.19 (TYP)

R0.063

0.182

C'BORE $\phi 0.201 \times 0.100$ DEEP
DRILL #21 ($\phi 0.159$)
TAP 10-32UNF-3B THRU
(2 PLACES)

(TYP)
88 (TYP)
 $+0.002$
 -2.000 (TYP)

1.18

5.32

5.036

2.120

1.290

0.365

0.218

0.515

1.030

1.90

R0.19 (TYP)

DART

D3183-3

3

DETAL A

DETAIL

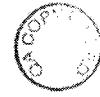
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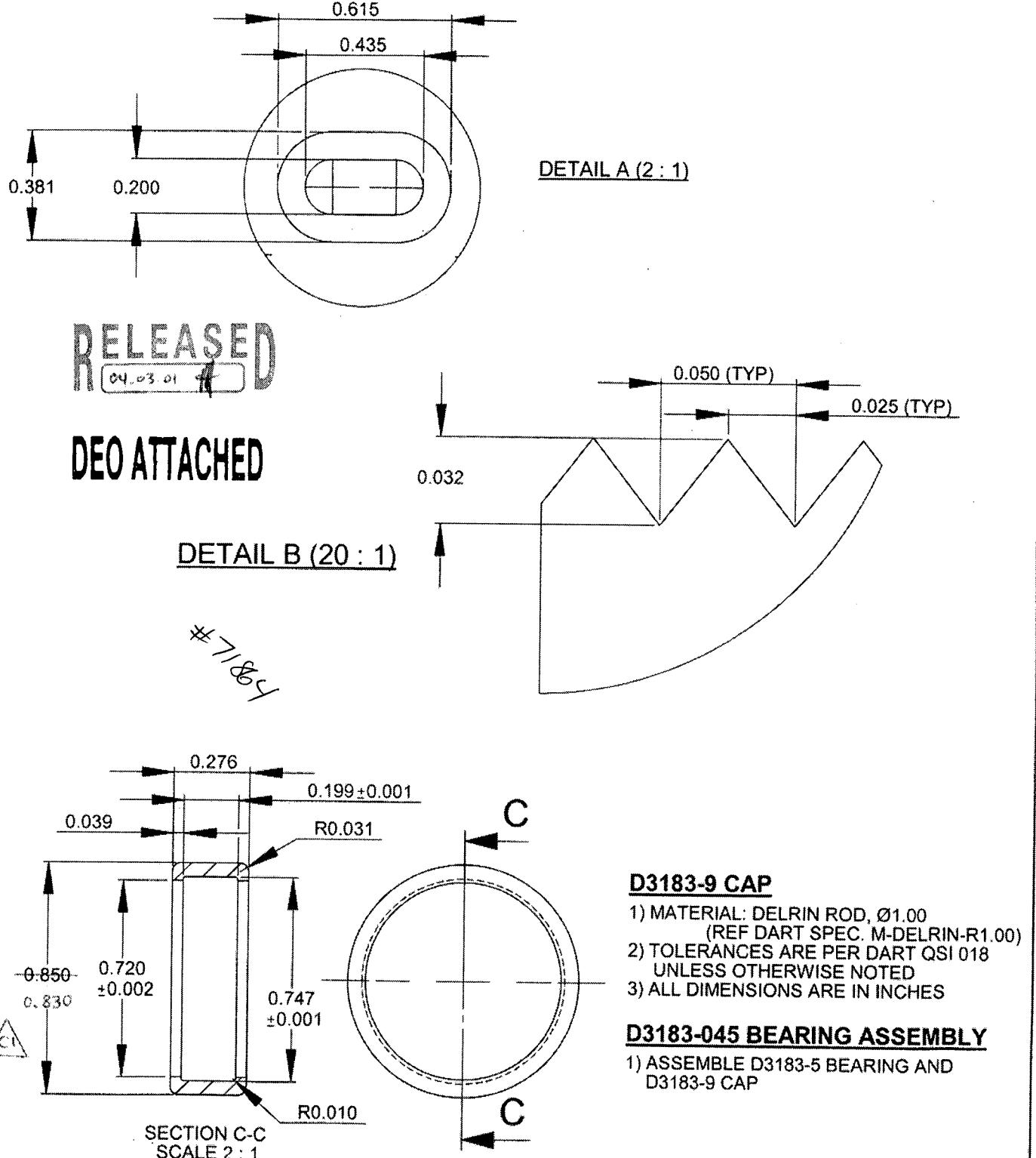
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
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DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. C
DATE	04.02.17	D3183	SHEET 4 OF 4



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NOTE: Date & initial all entries

DRAWING NO. D3183	TITLE BRACKET ASSEMBLY	REV/C1	DART AEROSPACE LTD ENGINEERING ORDER	D.E.O. NO. D3183-C1-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN qp	CHECKED JL	MFG. APPR. AA	APPROVED NP	DE APPR. MM		
DATE 10.05.14	DATE 10.06.30	DATE 10.06.30	DATE 10/06/30	DATE 10/06/30		

D3183-5 BEARING

ADD POSSIBLE SUPPLIER: KML P/N 6800-ZZ

BASIC LOAD RATING REQUIREMENT: $Cr = 1720 \text{ N (386 lb) MIN [DYNAMIC]}$
 $Cor = 840 \text{ N (188 lb) MIN [STATIC]}$

REF PAR 10-012

h081V#

RELEASED
2010-07-22
NP

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries